PMR210

• RC unit, class X1, metallized paper with integrated resistor
• 0.022 – 0.1 µF, 100 Ω, 250 VAC, +85 °C

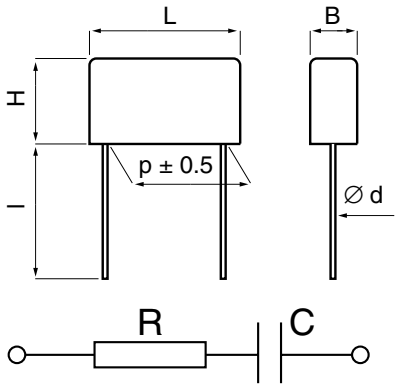
- RC unit for safety applications.
- Small dimensions
- High dU/dt capability.
- Self-extinguishing encapsulation. The material is recognized acc. to UL 94 V-0
- Good resistance to ionisation due to impregnated dielectric.
- Excellent self-healing properties. Ensures long life even when subjected to frequent overvoltages.
- The impregnated paper ensures excellent stability giving outstanding reliability properties, especially in applications having continuous operation.

TYPICAL APPLICATIONS

RC unit for use in DC and AC applications for:
– contact protection
– interference suppression of contacts
– transient suppression

CONSTRUCTION

Single layer metallized paper, encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94V-0. The resistance in the metal layer is utilized as series resistance, integrated resistor.



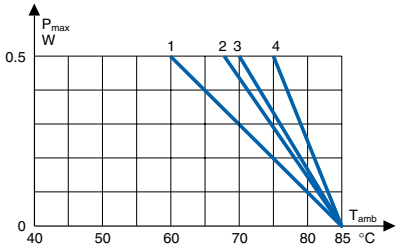
d = 0.8 for p = 15.2 and 20.3
1.0 for p = 25.4

l: standard: 30 +5/-0 mm
option: short leads, tolerance +0/-1 mm (standard 6 mm, code R06)
Other lead lengths on request.

TECHNICAL DATA

Rated voltage	250 VAC, 50/60 Hz
Capacitance range	0.022–0.1 µF
Capacitance tolerance	± 20%
Resistance range	100 Ω
Resistance tolerance	± 30%
Peak pulse voltage	1000 V
Temperature range	–40 to +85°C
Climatic category	40/085/56/B
Approvals	S, N, D, FI, VDE, SEV, UL
Series resistance	The series resistance is defined at 100 kHz
Insulation resistance	≥ 1000 MΩ Measured at 500 VDC after 2 min, +23°C
Pulse current	Max 12 A repetitive. Max 20 A peak for occasional transients.
Test voltage between terminals	The 100% screening factory test is carried out at 3000 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test.
In DC applications	Recommended voltage ≤ 1000 VDC.
Power ratings	The average losses may reach 0.5 W provided the surface temperature does not exceed + 85°C. For maximum permitted power dissipation vs temperature, see derating curves.

Curve	Dimensions
1	B = 7.3
1	B = 8.5
2	B = 9.0
3	B = 11.3
4	B = 10.6



Maximum allowable power dissipation vs ambient temperature and case sizes.

ARTICLE TABLE

Capacitance µF	Resistance Ω	Max dimensions in mm B	H	L	p	Quantity per package R30 pcs	R06 pcs	reel taped pcs	Weight g	Approvals S	N	D	FI	VDE	SEV	UL	Article code
0.022	100	7.3	13.0	19.0	15.2	400	800	400	3.0	√	√	√	√	√	√	√	PMR210MB5220M100R30
0.033	100	8.5	14.3	18.5	15.2	300	500	350	3.8	√	√	√	√	√	√	√	PMR210MB5330M100R30
0.047	100	9.0	15.0	24.0	20.3	200	1200	250	5.0	√	√	√	√	√	√	√	PMR210MC5470M100R30
0.068	100	11.3	16.5	24.0	20.3	150	1000	180	7.0	√	√	√	√	√	√	√	PMR210MC5680M100R30
0.10	100	10.6	16.1	30.5	25.4	150	1000		8.0	√	√	√	√	√	√	√	PMR210ME6100M100R30

APPROVALS/REFERENCE DOCUMENTS

Certification Body	Specification	Approval reference
S	EN 132400	9528106
FI	EN 132400	184191-01
N	EN 132400	293103075
D	EN 132400	303424
VDE	EN 132400	91806
SEV	EN 132400	00-1928
UL	UL 1414 Across-the-line (U_R = 250 VAC)	E 73869

MARKING

- RIFA
- RIFA article code
- RC unit
- Rated capacitance and resistance
- Rated voltage
- IEC 60065
- SH, for self-healing
- Climatic category according to IEC 60068-1, appendix A
- Passive flammability class
- Approval marks
- Manufacturing code (year, month)

ENVIRONMENTAL TEST DATA

Vibration	IEC 60068-2-6 Test Fc	3 directions at 2 hour each 10 – 500 Hz at 0.75 mm or 98 m/s²	No visible damage No open or short circuit
Bump	IEC 60068-2-29 Test Eb	4000 bumps at 390 m/s²	No visible damage No open or short circuit
Solderability	IEC 60068-2-20 Test Ta	Solder globule method	Wetting time for d ≤ 0.8 < 1 s for d > 0.8 < 1.5 s
Active flammability	EN 132400		
Passive flammability	IEC 60384-14 (1993) EN 132400 UL 1414	Enclosure material of UL 94V-0 flammability class	
Humidity	IEC 60068-2-3 Test Ca	+40°C and 90 – 95% R.H.	56 days

PACKING

RC units in standard design (lead length 30 mm) and with L < 24 mm and lead length 5 or 6 mm are packed bulk in a box with dimensions 245 x 145 x 80 mm. Quantity/package as per article table.

RC units with L ≥ 24 mm and lead length 5 or 6 mm are packed on trays piled in a box with dimensions 300 x 260 x 195 mm. Quantity/package as per article table.

Reels with taped capacitors are packed 10 in a box with dimensions 370 x 370 x 560 mm. The standard quantity/reel is for 360 mm reel. If 500 mm reel is required, it must be specified when ordering and the quantity is 2 x the given quantity.

ORDERING INFORMATION

The article code for the standard part is given in the article table.
For other options, see page 21.